AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Previously Presented) A polymer comprising a phenolic monomeric unit wherein the H atom of the hydroxy group of the phenolic monomeric unit is replaced by a N-imide group Q having the structure

wherein L is a linking group, wherein k is 0 or 1, wherein L is covalently bound to the O atom of the polymer when k is 1, or wherein the N atom of the N-imide group is covalently bound to the O atom of the polymer when k is 0, wherein X or Y are independently selected from O or S, and wherein T^1 and T^2 represent a terminal group.

- 2. (Original) A polymer according to claim 1 wherein the terminal groups T^1 and T^2 are independently selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein T^1 and T^2 together with the N-imide group represent the necessary atoms to form a cyclic structure, or wherein T^1 and T^2 represent the following structures $-L^1-R^1$ and $-L^2-R^2$, wherein L^1 and L^2 represent independently a linking group, wherein R^1 and R^2 are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, -CN, or $-NO_2$, or therein two groups selected from each L^1 , L^2 , R^1 and R^2 together represent the necessary atoms to form a cyclic structure.
- 3. (Withdrawn) A polymer according to claim 1 wherein the N-imide group Q has the following formula

$$-(\mathbf{P})^{\frac{k}{m-1}} \mathbf{Q}_1$$

wherein G¹ and G² are independently selected from O, S, NR³ or CR⁴R⁵, with the limitation that G¹ is not O or S when G² is O and that G¹ is not O or S when G² is NR³, wherein R⁴ and R⁵ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or -L³-R⁶, wherein L³ is a linking group, wherein R³ and R⁶ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R³, R⁴, R⁵, R⁶ and L³ together represent the necessary atoms to form a cyclic structure.

4. (Withdrawn - Currently Amended) A polymer according to claim 1 wherein the N-imide group Q has the following formula

$$-(\mathbf{L}) \stackrel{k}{=} \mathbf{M} \qquad \qquad \mathbf{G}^{3}$$

wherein G³ to G⁵ are independently selected from O, S, NR7 or CR8R9, with the limitation that at least one group, selected from G³ to G⁵, is CR8R9 and that two neighboring groups, selected from G³ to G⁵, are not represented by O and S, by O and NR7, by S and NR7 or by O and O, or wherein G⁴ is a linking group, wherein R8 and R9 are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or -L⁴-L¹⁰, wherein L⁴ is a linking group, wherein R7 and R¹⁰ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R7, R8, R9, R¹⁰ and L⁴ together represent the necessary atoms to form a cyclic structure.

5. (Previously Presented) A polymer according to claim 1 wherein the N-imide group Q has the following formula

$$-(L) \underset{Y}{\overset{X}{\longleftarrow}} \mathbb{R}^{14}$$

wherein G^6 is a group selected from O, S, NR^{11} or $CR^{12}R^{13}$, wherein m is o or 1, wherein R^{12} to R^{15} are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or $-L^5-R^{16}$, wherein L^5 is a linking group, wherein R^{11} and R^{16} are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R^{11} , R^{12} , R^{13} , R^{14} , R^{15} , R^{16} and L^5 together represent the necessary atoms to form a cyclic structure.

6. (Withdrawn) A polymer according to claim 1 wherein the N-imide group Q has the following formula

$$\frac{\chi}{\left(E^{\frac{1}{p}}R^{20}\right)}$$

wherein E^1 and E^2 are independently selected from O, S, NR^{17} or $CR^{18}R^{19}$, wherein p and q are independently 0 or 1, wherein R^{18} to R^{21} are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or $-L^6-R^{22}$, wherein L^6 is a linking group, wherein R^{17} and R^{22} are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

wherein each R²³ to R²⁶ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, -SO₂-NH-R²⁷, -NH-SO₂-R³⁰, -CO-NR²⁷-R²⁸, -NR²⁷-CO-R³⁰, -NR²⁷-CO- $NR^{28}-R^{29}$, $-NR^{27}-CS-NR^{28}-R^{29}$, $-NR^{27}-CO-O-R^{28}$, $-O-CO-NR^{27}-R^{28}$, $-O-CO-R^{30}$, $-CO-O-R^{27}$, $-CO-O-R^{28}$, $-CO-O-R^{29}$, -CO-O-C-C $CO-R^{27}$, $-SO_3-R^{27}$, $-O-SO_2-R^{30}$, $-SO_2-R^{27}$, $-SO-R^{30}$, $-P(=O)(-O-R^{27})(-O-R^{28})$, $-O-P(=O)(-O-R^{27})(-O-R^{28})$ R^{27})(-O- R^{28}), -N R^{27} - R^{28} , -O- R^{27} , -S- R^{27} , -CN, -NO₂, -N(-CO- R^{27})(-CO- R^{28}), -Nphthalimidyl, -M-N-phthalimidyl, or -M-R²⁷, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R²⁷ to R²⁹ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R³⁰ is selected from an optionally substituted alkyl. alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein a and d are independently 0, 1, 2, 3 or 4, wherein b and c are independently 0, 1, 2 or 3, wherein E³ is selected from O, S, NR³¹ or CR³²R³³, wherein R³² and R³³ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or $-L^7 - R^{34}$, wherein L^7 is a linking group, wherein R³¹ and R³⁴ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

wherein R³⁵ to R⁴⁴ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, -SO₂-NH-R⁴⁵, -NH-SO²-R⁴⁸, -CO-NR⁴⁵-R⁴⁶, -NR⁴⁵-CO-R⁴⁸, -NR⁴⁵-CO-NR⁴⁶-R⁴⁷, -NR⁴⁵-CS-NR⁴⁶-R⁴⁷, -NR⁴⁵-CO-O-R⁴⁶, -O-CO-NR⁴⁵-R⁴⁶, -O-CO-R⁴⁸, -CO-O-R⁴⁵, -CO-R⁴⁵, -SO₃-R⁴⁵, -O-SO₂-R⁴⁸, -SO₂-R⁴⁵, -SO-R⁴⁸, -P(=O)(O-R⁴⁵)(-O-R⁴⁶), -O-P(=O)(-O-R⁴⁵)(-O-R⁴⁶), -NR⁴⁵-R⁴⁶, -O-R⁴⁵, -S-R⁴⁵, -CN, -N(-CO-R⁴⁵)(-CO-R⁴⁶), -N-phthalimidyl, -M-N-phthalimidyl, or -M-R⁴⁵, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R⁴⁵ to R⁴⁷ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, and wherein R⁴⁸ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heteroaryl, aralkyl or heteroaralkyl group.

wherein R⁴⁹ to R⁵⁶ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, and wherein R⁵⁷ and R⁵⁸ are independently selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

- 11. (Previously Presented) A polymer according to claim 1, wherein said polymer comprising a phenolic monomeric unit is a novolac, resol or polyvinylphenol.
- 12. (Previously Presented) A heat-sensitive lithographic printing plate precursor comprising a support having a hydrophilic surface and an oleophilic coating provided on the hydrophilic surface, said coating comprising an infrared light absorbing agent and a polymer comprising a phenolic monomeric unit wherein the H atom of the hydroxy group of the phenolic monomeric unit is replaced by a N-imide group Q having the structure

wherein L is a linking group, wherein k is 0 or 1, wherein L is covalently bound to the O atom of the polymer when k is 1, or wherein the N atom of the N-imide group is covalently bound to the O atom of the polymer when k is 0, wherein X or Y are independently selected from O or S, and wherein T¹ and T² represent a terminal group.

- 13. (Original) A lithographic printing plate precursor according to claim 12, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 14. (Previously Presented) A lithographic printing plate precursor according to claim 13, wherein said dissolution inhibitor is selected from the group consisting of

an organic compound which comprises at least one aromatic group and a hydrogen bonding site,

a polymer or surfactant comprising siloxane or perfluoroalkyl units, and mixtures thereof.

15. (Canceled)

- 16. (Previously Presented) A lithographic printing plate precursor according to claim 12, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
 - 17. (Canceled)
- 18. (Withdrawn) A polymer according to claim 2 wherein the N-imide group Q has the following formula

$$-(r)^{\frac{r}{k}-n}\int_{\mathbb{R}^{d}}^{\mathbb{R}^{d}}$$

wherein G¹ and G² are independently selected from O, S, NR³ or CR⁴R⁵, with the limitation that G¹ is not O or S when G² is O and that G¹ is not O or S when G² is NR³, wherein R⁴ and R⁵ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or -L³-R⁶, wherein L³ is a linking group, wherein R³ and R⁶ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R³, R⁴, R⁵, R⁶ and L³ together represent the necessary atoms to form a cyclic structure.

19. (Withdrawn - Currently Amended) A polymer according to claim 2 wherein the N-imide group Q has the following formula

$$-(r)^{\frac{k}{2}}M$$

wherein G³ to G⁵ are independently selected from O, S, NR⁷ or CR⁸R⁹, with the limitation that at least one group, selected from G³ to G⁵, is CR⁸R⁹ and that two neighbouring groups, selected from G³ to G⁵, are not represented by O and S, by O and NR⁷, by S and NR⁷ or by O and O, or wherein G⁴ is a linking group, wherein R⁸ and R⁹ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl,

heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or $-L^4-L^{10}$, wherein L^4 is a linking group, wherein R^7 and R^{10} are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R^7 , R^8 , R^9 , R^{10} and L^4 together represent the necessary atoms to form a cyclic structure.

20. (Previously Presented) A polymer according to claim 2 wherein the N-imide group Q has the following formula

$$-(L) = R^{15}$$

wherein G⁶ is a group selected from O, S, NR¹¹ or CR¹²R¹³, wherein m is o or 1, wherein R¹² to R¹⁵ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or -L⁵-R¹⁶, wherein L⁵ is a linking group, wherein R¹¹ and R¹⁶ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶ and L⁵ together represent the necessary atoms to form a cyclic structure.

21. (Withdrawn) A polymer according to claim 2 wherein the N-imide group Q has the following formula

$$-(L) \frac{X}{k} R^{\frac{1}{p}} R^{20}$$

$$\mathbb{R}^{\frac{1}{p}} \mathbb{R}^{21}$$

wherein E¹ and E² are independently selected from O, S, NR¹⁷ or CR¹⁸R¹⁹, wherein p and q are independently 0 or 1, wherein R¹⁸ to R²¹ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or -L⁶-R²², wherein L⁶ is a linking group, wherein R¹⁷ and R²² are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

22. (Withdrawn) A polymer according to claim 2 wherein the N-imide group Q has one of the following formula:

$$-(L)_{\overline{k}} = -(L)_{\overline{k}} =$$

wherein each R²³ to R²⁶ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, -SO₂-NH-R²⁷, -NH-SO₂-R³⁰, -CO-NR²⁷-R²⁸, -NR²⁷-CO-R³⁰, -NR²⁷-CO-NR²⁸-R²⁹, -NR²⁷-CS-NR²⁸-R²⁹, -NR²⁷-CO-O-R²⁸, -O-CO-NR²⁷-R²⁸, -O-CO-R³⁰, -CO-O-R²⁷, - $CO-R^{27}$, $-SO_3-R^{27}$, $-O-SO_2-R^{30}$, $-SO_2-R^{27}$, $-SO-R^{30}$, $-P(=O)(-O-R^{27})(-O-R^{28})$, $-O-P(=O)(-O-R^{27})(-O-R^{28})$, $-O-P(=O)(-O-R^{27})(-O-R^{28})$, $-O-P(=O)(-O-R^{28})$ R^{27})(-O- R^{28}), -N R^{27} - R^{28} , -O- R^{27} , -S- R^{27} , -CN, -NO₂, -N(-CO- R^{27})(-CO- R^{28}), -Nphthalimidyl, -M-N-phthalimidyl, or -M-R²⁷, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R²⁷ to R²⁹ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R³⁰ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein a and d are independently 0, 1, 2, 3 or 4, wherein b and c are independently 0, 1, 2 or 3, wherein E³ is selected from O, S, NR³¹ or CR³²R³³, wherein R³² and R³³ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or $-L^7 - R^{34}$, wherein L^7 is a linking group, wherein R³¹ and R³⁴ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

23. (Withdrawn) A polymer according to claim 2 wherein the N-imide group Q has one of the following formula:

wherein R³⁵ to R⁴⁴ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, -SO₂-NH-R⁴⁵, -NH-SO²-R⁴⁸, -CO-NR⁴⁵-R⁴⁶, -NR⁴⁵-CO-R⁴⁸, -NR⁴⁵-CO-NR⁴⁶-R⁴⁷, -NR⁴⁵-CO-O-R⁴⁶, -O-CO-NR⁴⁵-R⁴⁶, -O-CO-R⁴⁸, -CO-O-R⁴⁵, -CO-R⁴⁵, -SO₃-R⁴⁵, -O-SO₂-R⁴⁸, -SO₂-R⁴⁵, -SO-R⁴⁸, -P(=O)(O-R⁴⁵)(-O-R⁴⁶), -O-P(=O)(-O-R⁴⁵)(-O-R⁴⁶), -NR⁴⁵-R⁴⁶, -O-R⁴⁵, -S-R⁴⁵, -CN, -N(-CO-R⁴⁵)(-CO-R⁴⁶), -N-phthalimidyl, -M-N-phthalimidyl, or -M-R⁴⁵, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R⁴⁵ to R⁴⁷ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R⁴⁸ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heteroaryl, aralkyl or heteroaralkyl group.

wherein R⁴⁹ to R⁵⁶ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, and wherein R⁵⁷ and R⁵⁸ are independently selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

- 26. (Previously Presented) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the terminal groups T^1 and T^2 are independently selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein T^1 and T^2 together with the N-imide group represent the necessary atoms to form a cyclic structure, or wherein T^1 and T^2 represent the following structures $-L^1-R^1$ and $-L^2-R^2$, wherein L^1 and L^2 represent independently a linking group, wherein R^1 and R^2 are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, -CN, or $-NO_2$, or therein two groups selected from each L^1 , L^2 , R^1 and R^2 together represent the necessary atoms to form a cyclic structure.
- 27. (Withdrawn Currently Amended) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has the following formula

$$-(T) \stackrel{K}{=} M \xrightarrow{G_3} G,$$

wherein G³ to G⁵ are independently selected from O, S, NR7 or CR8R9, with the limitation that at least one group, selected from G³ to G⁵, is CR8R9 and that two neighboring groups, selected from G³ to G⁵, are not represented by O and S, by O and NR7, by S and NR7 or by O and O, or wherein G⁴ is a linking group, wherein R8 and R9 are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or -L⁴-L¹¹0, wherein L⁴ is a linking group, wherein R7 and R¹¹0 are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R7, R8, R9, R¹¹0 and L⁴ together represent the necessary atoms to form a cyclic structure.

28. (Withdrawn - Currently Amended) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has the following formula

$$-(\mathbf{r}) \stackrel{\mathbf{k}}{=} \mathbf{n} \stackrel{\mathbf{k}}{\longrightarrow} \mathbf{c}_{\mathbf{a}}$$

wherein G³ to G⁵ are independently selected from O, S, NR7 or CR8R9, with the limitation that at least one group, selected from G³ to G⁵, is CR8R9 and that two neighboring groups, selected from G³ to G⁵, are not represented by O and S, by O and NR7, by S and NR7 or by O and O, or wherein G⁴ is a linking group, wherein R8 and R9 are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or -L⁴-L¹⁰, wherein L⁴ is a linking group, wherein R7 and R¹⁰ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R7, R8, R9, R¹⁰ and L⁴ together represent the necessary atoms to form a cyclic structure.

29. (Previously Presented) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has the following formula

$$-(L) = N \qquad \qquad R^{14}$$

wherein G^6 is a group selected from O, S, NR^{11} or $CR^{12}R^{13}$, wherein m is o or 1, wherein R^{12} to R^{15} are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or $-L^5-R^{16}$, wherein L^5 is a linking group, wherein R^{11} and R^{16} are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or wherein two groups selected from each R^{11} , R^{12} , R^{13} , R^{14} , R^{15} , R^{16} and L^5 together represent the necessary atoms to form a cyclic structure.

30. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has the following formula

$$-(L) \frac{X}{k} R^{\frac{1}{p}} R^{20}$$

$$\mathbb{R}^{\frac{2}{q}} R^{21}$$

wherein E^1 and E^2 are independently selected from O, S, NR^{17} or $CR^{18}R^{19}$, wherein p and q are independently 0 or 1, wherein R^{18} to R^{21} are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group or $-L^6-R^{22}$, wherein L^6 is a linking group, wherein R^{17} and R^{22} are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

31. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has one of the following formula:

$$-(L)_{k} = \begin{bmatrix} X & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & &$$

wherein each R^{23} to R^{26} are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, $-SO_2$ -NH- R^{27} , $-NH-SO_2$ - R^{30} , $-CO-NR^{27}$ - R^{28} , $-NR^{27}$ -CO- R^{30} , $-NR^{27}$ -CO- R^{29} , $-NR^{27}$ -CS- R^{28} - R^{29} , $-NR^{27}$ -CS- R^{28} - R^{29} , $-NR^{27}$ -CO- R^{28} , -O-CO- R^{28} , -O-CO- R^{27} , $-CO-R^{27}$, $-CO-R^{27}$, $-CO-R^{27}$, $-SO_3$ - R^{27} , $-O-SO_2$ - R^{30} , $-SO_2$ - R^{27} , $-SO-R^{30}$, -P(=O)(-O- R^{27})(-O- R^{28}), $-NR^{27}$ - R^{28} , $-O-R^{27}$, $-S-R^{27}$, -CN, $-NO_2$, -N(-CO- R^{27})(-CO- R^{28}), -N-phthalimidyl, -M-N-phthalimidyl, or -M- R^{27} , wherein M represents a divalent linking group

containing 1 to 8 carbon atoms, wherein R^{27} to R^{29} are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein R^{30} is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, wherein a and d are independently 0, 1, 2, 3 or 4, wherein b and c are independently 0, 1, 2 or 3, wherein E^3 is selected from O, S, NR^{31} or $CR^{32}R^{33}$, wherein R^{32} and R^{33} are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, or $-L^7$ $-R^{34}$, wherein L^7 is a linking group, wherein R^{31} and R^{34} are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

32. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has one of the following formula:

wherein R³⁵ to R⁴⁴ are independently selected from hydrogen, an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group, halogen, -SO₂-NH-R⁴⁵, -NH-SO²-R⁴⁸, -CO-NR⁴⁵-R⁴⁶, -NR⁴⁵-CO-R⁴⁸, -NR⁴⁵-CO-NR⁴⁶-R⁴⁷, -NR⁴⁵-CS-NR⁴⁶-R⁴⁷, -NR⁴⁵-CO-O-R⁴⁶, -O-CO-NR⁴⁵-R⁴⁶, -O-CO-R⁴⁸, -CO-O-R⁴⁵, -CO-R⁴⁵, -SO₃-R⁴⁵, -O-SO₂-R⁴⁸, -SO₂-R⁴⁵, -SO-R⁴⁸, -P(=O)(O-R⁴⁵)(-O-R⁴⁶), -O-P(=O)(-O-R⁴⁵)(-O-R⁴⁶), -N-phthalimidyl, -M-N-phthalimidyl, or -M-R⁴⁵, wherein M represents a divalent linking group containing 1 to 8 carbon atoms, wherein R⁴⁵ to R⁴⁷ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl

group, wherein R⁴⁸ is selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

33. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has one of the following formula:

wherein R⁴⁹ to R⁵⁶ are independently selected from hydrogen or an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group,

and wherein R⁵⁷ and R⁵⁸ are independently selected from an optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclic, aryl, heteroaryl, aralkyl or heteroaralkyl group.

34. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 12, wherein the N-imide group Q has one of the following formula:

- 35. (Previously Presented) A heat-sensitive lithographic printing plate precursor according to claim 26, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 36. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 27, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 37. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 28, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 38. (Previously Presented) A heat-sensitive lithographic printing plate precursor according to claim 29, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 39. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 30, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 40. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 31, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.

- 41. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 32, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 42. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 33, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 43. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 34, wherein said coating further comprises a dissolution inhibitor and wherein said precursor is a positive working lithographic printing plate precursor.
- 44. (Previously Presented) A heat-sensitive lithographic printing plate precursor according to claim 26, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
- 45. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 27, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
- 46. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 28, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
- 47. (Previously Presented) A heat-sensitive lithographic printing plate precursor according to claim 29, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.

- 48. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 30, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
- 49. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 31, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
- 50. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 32, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
- 51. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 33, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.
- 52. (Withdrawn) A heat-sensitive lithographic printing plate precursor according to claim 34, wherein said coating further comprises a latent Brönsted acid and an acid-crosslinkable compound and wherein said precursor is a negative working lithographic printing plate precursor.